

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method, comprising:  
sending power to at least one radio frequency identification (RFID) transponder (tag), including:  
| sending power  $P_j$  for a first time interval  $t_j$  ~~to the at least one tag~~ at a first frequency  $f_j$  chosen from a list of  $N$  frequencies  $f_1, f_2, f_3, \dots, f_N$ , and  
| sending power  $P_{j+1}$  for a time interval  $t_{j+1}$  ~~to the at least one tag~~ at a second frequency  $f_{j+1}$  chosen from the list of  $N$  frequencies, ~~wherein  $t_j$  and  $t_{j+1}$  are time intervals of different lengths and~~  
| wherein the time interval  $t_j$  ends prematurely if none of said at least one tag responds, and the power  $P_{j+1}$  for the time interval  $t_{j+1}$  is subsequently sent;  
| wherein the corresponding frequencies  $f_j$  and  $f_{j+1}$  are different frequencies ~~in a same frequency band~~, and  
| wherein a time between sending power  $P_j$  and  $P_{j+1}$  is less than a time  $t_0$  in which the at least one tag loses a particular tag function if no power is sent to the tag.
2. (Previously Presented) The method of claim 1, wherein  $t_{j+1}$  is chosen to be long enough that all tags in operative communication with the base station at frequency  $f_{j+1}$  have identified themselves.
3. (Previously Presented) The method of claim 1, wherein the sending of power  $P_{j+1}$  is stopped after the time interval  $t_{j+1}$  when no further tags identify themselves.
4. (Previously Presented) The method of claim 1, wherein  $P_j$  and  $P_{j+1}$  are different powers.

5. (Previously Presented) The method claim 4, wherein  $P_{j+1}$  is reduced from  $P_j$  when  $t_j$  is too short a time for all tags in operative communication with the base station to have identified themselves.

6. (Original) The method of claim 1, wherein  $|t_{j+1} - t_j| > 0.05 (t_j + t_{j+1})$ .

7. (Original) The method of claim 6, wherein  $|t_{j+1} - t_j| > 0.1 (t_j + t_{j+1})$ .

8. (Original) The method of claim 7, wherein  $|t_{j+1} - t_j| > .3 (t_j + t_{j+1})$ .

9. (Original) The method of claim 1, wherein  $P_j$  is a function of time.

10. (Original) The method of claim 9, wherein  $P_j$  is a monotonically increasing function of time.

11. (Previously Presented) The method of claim 10, wherein  $P_j$  is increased when no further tags identify themselves.

12. (Currently Amended) A method of frequency hopping, comprising:  
sending a first power at a first frequency to a plurality of tags during a first time interval having a first length;

receiving responses from the plurality of tags; and

prematurely ending the first time interval in which the first power is sent and subsequently sending a second power at a second frequency to the plurality of tags if a time between received responses exceeds a response time sufficient to enable at least one of the plurality of tags to respond, the second power being sent during a second time interval having a second length that is different than the first length of the first time interval, the first frequency of the first power being different from the second frequency of the second power, the first frequency and the second frequency being in a same frequency band.

13. (Previously Presented) The method of claim 12, wherein the response time is less than a flag reset time  $t_0$  of a tag of the plurality of tags.

14. (Previously Presented) The method of claim 12, wherein the response time is less than a tag power down time.

15. (Previously Presented) The method of claim 12, wherein the response time is less than 20 milliseconds.

16. (Canceled)

17. (Previously Presented) The method of claim 12, further comprising sending the second power at the second frequency to the plurality of tags when a total time of sending the first power at the first frequency exceeds a protocol time limit  $t_{\max}$ .

18. (Currently Amended) A RFID system, comprising:  
at least a first antenna; and  
a base station communicatively coupled to at least the first antenna and operable to:

send a first power at a first frequency to a plurality of tags during a first time interval having a first length,

receive responses from the plurality of tags, and

prematurely end the first time interval in which the first power is sent and subsequently send a second power at a second frequency to the plurality of tags if a time between received responses exceeds a response time sufficient to enable at least one of the plurality of tags to respond, the second power being sent during a second time interval having a second length that is different than the first length of the first time interval, the first frequency of the first power being different from the second frequency of the second power, the first frequency and the second frequency being in a same frequency band.

19. (Currently Amended) A RFID system, comprising:  
a plurality of tags; and

a base station operable to send a first power at a first frequency to the plurality of tags during a first time interval having a first length, receive responses from the plurality of tags, and prematurely end the first time interval in which the first power is sent and subsequently send a second power at a second frequency to the plurality of tags if a time between received responses exceeds a response time sufficient to enable at least one of the plurality of tags to respond, ~~the base station operable to send the second power during a second time interval having a second length that is different than the first length of the first time interval~~, the first frequency of the first power being different from the second frequency of the second power, ~~the first frequency and the second frequency being in a same frequency band.~~

20. (Currently Amended) The system of claim 19, wherein the first length of the first time interval in which the first power is sent is greater than ~~the~~ a second length of ~~the~~ a second time interval in which the second power is sent.

21. (Currently Amended) A RFID system, comprising:

means for sending a first power at a first frequency to a plurality of tags during a first time interval having a first length; and

means for receiving responses from the plurality of tags; and

the means for sending further prematurely ending the first time interval in which the first power is sent and subsequently sending a second power at a second frequency to the plurality of tags if a time between received responses exceeds a response time sufficient to enable at least one of the plurality of tags to respond, ~~the second power being sent during a second time interval having a second length that is different than the first length of the first time interval~~, the first frequency of the first power being different from the second frequency of the second power, ~~the first frequency and the second frequency being in a same frequency band.~~

22. (Currently Amended) The system of claim 21 wherein the first length of the first time interval in which the first power is sent is greater than ~~the~~ a second length of ~~the~~ a second time interval in which the second power is sent.

23-27. (Canceled)

28. (New) The method of claim 1 wherein the first frequency  $f_j$  and the second frequency  $f_{j+1}$  are different frequencies in a same frequency band.

29. (New) The method of claim 12 wherein the first and second frequencies are different frequencies in a same frequency band.

30. (New) The system of claim 18 wherein the first and second frequencies are different frequencies in a same frequency band.

31. (New) The system of claim 19 wherein the first and second frequencies are different frequencies in a same frequency band.

32. (New) The system of claim 21 wherein the first and second frequencies are different frequencies in a same frequency band.

33. (New) A method, comprising:  
sending power to at least one radio frequency identification (RFID) transponder (tag), including:  
sending power  $P_j$  for a first time interval  $t_j$  at a first frequency  $f_j$  chosen from a list of  $N$  frequencies  $f_1, f_j, f_{j+1}, \dots, f_N$ ;  
reducing power  $P_j$  to a level  $P_{j+1}$ ,  $P_j > P_{j+1}$ , for a rest of the first time interval  $t_j$  if a number of responded tags is more than some particular number; and  
sending power  $P_{j+1}$  for a time interval  $t_{j+1}$  at a second frequency  $f_{j+1}$  chosen from the list of  $N$  frequencies,

wherein the frequencies  $f_j$  and  $f_{j+1}$  are different frequencies, and

wherein a time between sending power  $P_j$  and  $P_{j+1}$  is less than a time  $t_0$  in which the at least one tag loses a particular tag function if no power is sent to the tag.

34. (New) The method of claim 33 wherein the first and second frequencies are different frequencies in a same frequency band